

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

HUAWEI TECHNOLOGIES CO. LTD.,

Plaintiff,

v.

T-MOBILE US, INC. and  
T-MOBILE USA, INC.,

Defendants.

No. 2:16-cv-52-JRG-RSP

JURY TRIAL DEMANDED

**MOVANT-INTERVENOR  
NOKIA SOLUTIONS AND NETWORKS US LLC'S  
ANSWER IN INTERVENTION  
AND  
NOKIA SOLUTIONS AND NETWORKS US LLC AND NOKIA  
SOLUTIONS AND NETWORKS OY'S COUNTERCLAIMS**

Intervenor Nokia Solutions and Networks US LLC (“NSN US”), for its Answer in Intervention to the Original Complaint For Patent Infringement [Dkt. No. 1] (“Complaint”) of Plaintiff Huawei Technologies Co., Ltd, (“Huawei Technologies”) responds to the numbered paragraphs of the Complaint with the following corresponding paragraphs:

**SCOPE OF NSN US’S ANSWER IN INTERVENTION**

NSN US’s intervention in this case is limited to defending claims arising out of the use of NSN US’s equipment provided to T-Mobile USA, Inc. To the extent a response is required to averments outside of this scope, NSN US is without knowledge or information sufficient to form a belief as to the truth of the averments and therefore denies them.

**ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

1. NSN US admits that Huawei Technologies filed an Original Complaint for Patent Infringement against T-Mobile US, Inc. and T-Mobile USA, Inc.

**NATURE AND BASIS OF ACTION**

2. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 2 and therefore denies them.

3. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 3 and therefore denies them.

4. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 4 and therefore denies them.

5. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 5 and therefore denies them.

6. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 6 and therefore denies them.

7. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 7 and therefore denies them.

8. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 8 and therefore denies them.

9. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 9 and therefore denies them.

10. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 10 and therefore denies them.

11. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 11 and therefore denies them.

12. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 12 and therefore denies them.

13. Denied.

14. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 14 and therefore denies them.

15. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 15 and therefore denies them.

16. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 16 and therefore denies them.

17. NSN US denies the allegation that T-Mobile's wireless networks constitute "Infringing Wireless Networks." As to the remaining allegations of this paragraph, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 17 and therefore denies them.

18. NSN US denies the allegation that T-Mobile's wireless networks constitute "Infringing Wireless Networks." As to the remaining allegations of this paragraph, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 18 and therefore denies them.

19. NSN US denies the allegation that T-Mobile's wireless networks constitute "Infringing Wireless Networks." As to the remaining allegations of this paragraph, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 19 and therefore denies them.

20. NSN US denies the allegation that T-Mobile's wireless networks constitute "Infringing Wireless Networks." As to the remaining allegations of this paragraph, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 20 and therefore denies them.

21. Denied.

22. Denied.

23. Denied.

24. Denied.

25. Denied.

26. Denied.

27. NSN US denies the allegation that T-Mobile's wireless networks constitute "Infringing Wireless Networks" or "Wireless Infringing Networks." As to the remaining allegations of this paragraph, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 27 and therefore denies them.

28. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 28 and therefore denies them.

29. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 29 and therefore denies them.

30. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 30 and therefore denies them.

31. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 31 and therefore denies them.

32. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 32 and therefore denies them.

33. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 33 and therefore denies them.

### **PARTIES**

34. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 34 and therefore denies them.

35. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 35 and therefore denies them.

36. NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 36 and therefore denies them.

### **JURISDICTION AND VENUE**

37. NSN US admits the Complaint purports to bring an action under the patent laws of the United States, Title 35 of the United States Code, but denies that NSN US has committed any acts of infringement. NSN US admits that this Court has subject matter jurisdiction over

these patent law claims. Except as so admitted, NSN US denies any remaining allegations of paragraph 37.

38. NSN US admits the Complaint asserts U.S. Patent Nos. 8,069,365 (“the ’365 patent”); 8,719,617 (“the ’617 patent”); and 8,867,339 (“the ’339 patent”); and 9,235,462 (“the ’462 patent”).

39. NSN US admits that venue is proper for NSN US for purposes of this particular action. Except as so admitted, NSN denies any remaining allegations of paragraph 39.

40. NSN US denies the allegation that T-Mobile’s wireless networks constitute “Infringing Wireless Networks.” As to the remaining allegations of this paragraph, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 40 and therefore denies them.

### **COUNT ONE**

#### **(Alleged Infringement of U.S. Patent No. 8,069,365)**

41. NSN US repeats its responses to Paragraphs 1-40 above, as if fully set forth herein.

42. NSN US admits that information on the face of the ’365 patent, attached to the Complaint as Exhibit 1, states that it is titled “Method and Device for Realizing IP Multimedia Subsystem Disaster Tolerance.” NSN US admits that the face of the ’365 patent bears an issue date of “Nov. 29, 2011,” and lists as Assignee “Huawei Technologies Co., Ltd.” The remainder of the allegations contained in paragraph 42 are denied.

43. Upon knowledge and belief, the ’365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or

information sufficient to form a belief as to the truth of the allegations of paragraph 43 and therefore denies them.

44. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 44 and therefore denies them.

45. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 45 and therefore denies them.

46. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 46 and therefore denies them.

47. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 47 and therefore denies them.

48. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 48 and therefore denies them.

49. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 49 and therefore denies them.

50. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 50 and therefore denies them.

51. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 51 and therefore denies them.

52. Upon knowledge and belief, the '365 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 52 and therefore denies them.

## **COUNT TWO**

### **(Alleged Infringement of U.S. Patent No. 8,719,617)**

53. NSN US repeats its responses to Paragraphs 1-52 above, as if fully set forth herein.

54. NSN US admits that information on the face of the '617 patent, attached to the Complaint as Exhibit 2, states that it is titled "Method and Device for Realizing IP Multimedia Subsystem Disaster Tolerance." NSN US admits that the face of the '617 patent bears an issue



date of “May 6, 2014,” and lists as Assignee “Huawei Technologies Co., Ltd.” The remainder of the allegations contained in paragraph 54 are denied.

55. Upon knowledge and belief, the ’617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 55 and therefore denies them.

56. Upon knowledge and belief, the ’617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 56 and therefore denies them.

57. Upon knowledge and belief, the ’617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 57 and therefore denies them.

58. Upon knowledge and belief, the ’617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 58 and therefore denies them.

59. Upon knowledge and belief, the ’617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 59 and therefore denies them.

60. Upon knowledge and belief, the '617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 60 and therefore denies them.

61. Upon knowledge and belief, the '617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 61 and therefore denies them.

62. Upon knowledge and belief, the '617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 62 and therefore denies them.

63. Upon knowledge and belief, the '617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 63 and therefore denies them.

64. Upon knowledge and belief, the '617 patent does not implicate any network equipment provided by NSN US to T-Mobile. As a result, NSN US is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 64 and therefore denies them.

**COUNT THREE**

**(Alleged Infringement of U.S. Patent No. 8,867,339)**

65. NSN US repeats its responses to Paragraphs 1-64 above, as if fully set forth herein.

66. NSN US admits that information on the face of the '339 patent, attached to the Complaint as Exhibit 3, states that it is titled "Method, System and Device for Recovering Invalid Downlink Data Tunnel Between Networks." NSN US admits that the face of the '339 patent bears an issue date of "Oct. 21, 2014," and lists as Assignee "Huawei Technologies Co., Ltd." The remainder of the allegations contained in paragraph 66 are denied.

67. Denied.

68. Denied.

69. Denied.

70. Denied.

71. Denied.

72. Denied.

73. Denied.

74. Denied.

75. Denied.

76. Denied.

**COUNT FOUR**

**(Alleged Infringement of U.S. Patent No. 9,235,462)**

77. NSN US repeats its responses to Paragraphs 1-76 above, as if fully set forth herein.

78. NSN US admits that information on the face of the '462 patent, attached to the Complaint as Exhibit 4, states that it is titled "Tunnel Management Method, Tunnel Management Apparatus, and Communications System." NSN US admits that the face of the '462 patent bears an issue date of "Jan. 12, 2016," and lists as Assignee "Huawei Technologies Co., Ltd." The remainder of the allegations contained in paragraph 78 are denied.

79. Denied.

80. Denied.

81. Denied.

82. Denied.

83. Denied.

84. Denied.

85. Denied.

86. Denied.

87. Denied.

88. Denied.

**ANSWER TO DEMAND FOR JURY TRIAL**

89. This paragraph sets forth Huawei Technologies' demand for a trial by jury on all claims and issues so triable to which no response is required.

**ANSWER TO PRAYER FOR RELIEF**

90. To the extent any response is required to any paragraph of Huawei Technologies' Prayer for Relief, NSN US denies that Huawei Technologies is entitled to any of the requested relief and denies any allegations of its Prayer for Relief as to NSN US. NSN US further denies each and every allegation in the Complaint to which it has not specifically responded.

### **AFFIRMATIVE DEFENSES**

Subject to the responses above, NSN US alleges and asserts the following defenses in response to the allegations, undertaking the burden of proof only as to those defenses deemed affirmative defenses by law and without reducing or removing Huawei Technologies' burden of proof on its affirmative claims against NSN US, regardless of how such defenses are denominated herein. In addition to the affirmative defenses described below, subject to their responses above, NSN US specifically reserves all rights to allege additional affirmative defenses that become known through the course of discovery.

#### **FIRST AFFIRMATIVE DEFENSE**

##### **(Non-Infringement)**

1. NSN US equipment supplied to T-Mobile does not, alone or in combination, infringe any valid and enforceable claim of the Asserted Patents, either literally or under the doctrine of equivalents, nor is such equipment used in any infringement of any valid and enforceable claim.

#### **SECOND AFFIRMATIVE DEFENSE**

##### **(Invalidity)**

2. The claims of the Asserted Patents are invalid for failure to satisfy one or more of the requirements of 35 U.S.C. §§ 1 *et seq.*, including but not limited to 35 U.S.C. §§ 101, 102, 103, and 112, and/or 116.

#### **THIRD AFFIRMATIVE DEFENSE**

##### **(Prosecution History Estoppel)**

3. Huawei Technologies is estopped, based on statements, representations, and admissions made during prosecution of the applications that led to the Asserted Patents, from

asserting any interpretation of the claims of those patents that would be broad enough to cover any accused equipment or methods alleged to infringe those patents, either literally or under the doctrine of equivalents.

**FOURTH AFFIRMATIVE DEFENSE**

**(Equitable Defenses)**

4. Huawei Technologies' claims are barred, either whole or in part, by the doctrine of laches, waiver, estoppel, and/or unclean hands.

**FIFTH AFFIRMATIVE DEFENSE**

**(No Equitable Entitlement to Injunctive Relief)**

5. Huawei Technologies is not entitled to injunctive relief under any theory, including without limitation, because any alleged injury to Huawei Technologies is not immediate or irreparable, Huawei Technologies has an adequate remedy at law, and/or public policy concerns weigh against any injunctive relief.

**SIXTH AFFIRMATIVE DEFENSE**

**(Statutory Limitations on Damages)**

6. Any claim by Huawei Technologies for damages is limited by 35 U.S.C. §§ 252, 286, 287, or 307. Huawei Technologies is barred by 35 U.S.C. § 288 from recovering costs associated with this action.

**SEVENTH AFFIRMATIVE DEFENSE**

**(No Willful Infringement)**

7. Huawei Technologies is not entitled to enhanced damages under 35 U.S.C. § 284 because Huawei Technologies has failed to meet, and cannot meet as a matter of law, the requirements for willful infringement.

**EIGHTH AFFIRMATIVE DEFENSE**

**(Statutory Limitation)**

8. To the extent certain equipment accused of infringing the Asserted Patents are used by and/or manufactured for the United States Government, Huawei Technologies' claims involving NSN US equipment supplied to TMO with respect to such equipment may not be pursued in this Court and are subject to other limitations pursuant to 28 U.S.C. § 1498.

**NINTH AFFIRMATIVE DEFENSE**

**(Non-Compliance with SSO Undertakings and Obligations)**

9. Huawei Technologies' claims for relief are limited and/or barred, in whole or in part, by its undertakings and obligations to standards-setting organizations.

**TENTH AFFIRMATIVE DEFENSE**

**(Contractual Limitation on Damages - FRAND)**

10. Huawei Technologies' claims for monetary relief are limited by its obligation to license the Asserted Patents on fair, reasonable, and non-discriminatory terms.

**ELEVENTH AFFIRMATIVE DEFENSE**

**(Contractual Limitation on Damages - License)**

11. Huawei Technologies' claims for monetary relief are limited because NSN US was licensed to the Asserted Patents.

**TWELFTH AFFIRMATIVE DEFENSE**

**(Failure to State a Claim)**

12. Huawei Technologies' Complaint fails to state facts sufficient to constitute a claim upon which relief can be granted.

**THIRTEENTH AFFIRMATIVE DEFENSE**

**(Patent Exhaustion/Implied License)**

13. Huawei Technologies' claims of patent infringement are barred by the doctrines of patent exhaustion and/or implied license because, by way of example, NSN US and the customers or end users of NSN US's equipment were authorized to make, use, sell, and/or offer to sell products embodying the asserted claims of the Asserted Patents under the terms of license agreements with Huawei Technologies.

NSN US reserves the right to amend its Answer to add additional Affirmative Defenses under Rule 8(c) of the Federal Rules of Civil Procedure, the Patent Laws of the United States, and any other defenses, at law and equity (including but not limited to instances of inequitable conduct, unclean hands, patent misuse, and/or implied license) as they become known throughout the course of discovery in this case. Assertion of a defense is not a concession that NSN US has the burden of proving the matter asserted.



### **COUNTERCLAIMS**

1. Nokia Solutions and Networks US LLC and Nokia Solutions and Networks Oy (collectively, “NSN”), by and through its undersigned counsel, seeks declarations and judgments that Huawei Technologies Co. Ltd. and Huawei Device USA, Inc. (collectively, “Huawei”) infringe U.S. Patent Nos. 8,817,718 (“the ’718 patent”) and 8,553,636 (“the ’636 patent”) (collectively, “NSN’s Patents-In-Suit”).

### **NATURE OF THE ACTION**

2. This is an action for patent infringement. Huawei has infringed and continues to infringe, contribute to the infringement of, and/or actively induce others to infringe NSN’s Patents-In-Suit.

### **THE PARTIES**

5. Intervenor NSN US is a company organized and existing under the laws of the State of Delaware with substantial business operations at 6000 Connection Drive, Irving, Texas 75039-2600 and 601 Data Drive, Plano, Texas 75075.

6. NSN Oy is a foreign corporation, having its headquarters at Karaportti 3, 0210 Espoo, Finland.

7. Huawei Technologies has alleged that it is a Chinese corporation with its principal place of business at Bantian, Longgang District, Shenzhen, People’s Republic of China.

8. Upon information and belief, Huawei Device is a corporation organized under the laws of Texas, having a principal place of business at, 5700 Tennyson Parkway, Suite 500, Plano, Texas 75024.

### **JURISDICTION AND VENUE**

9. Subject to NSN US's affirmative defenses and denials, this Court has jurisdiction over the subject matter of these Counterclaims under, without limitation, 28 U.S.C. §§ 1331, 1367, 1338(a), 2201, and 2202.

10. Venue is appropriate because, *inter alia*, Huawei Technologies has consented to the propriety of venue in this Court by filing its claims for patent infringement in this Court, in response to which these counterclaims are asserted. Further, on information and belief, venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b) because Huawei has transacted business in this district, and has committed and/or induced acts of patent infringement in this district.

11. This Court has personal jurisdiction over Huawei Technologies because, at a minimum, Huawei Technologies has subjected itself to same by filing the underlying action for alleged infringement. This Court has personal jurisdiction over Huawei Device because, at a minimum, Huawei Device is organized under the laws of Texas, and maintains its principal place of business in this jurisdiction. Huawei has also filed suits against other parties in this jurisdiction. Further, on information and belief, Huawei is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this Judicial District. Further, Huawei has engaged in business activities including transacting business in this District and purposefully directing its business activities, including the sale of the Accused Products in this District, and the sale or offer for sale of goods

to this District to aid, abet, or contribute to the infringement of third parties in this District. For example, Huawei—either directly or through those acting on its behalf, such as authorized retailers—offers its Accused Products (defined below) for sale in this District. *See* <http://www.bestbuy.com/site/huawei-google-nexus-6p-4g-with-32gb-memory-cell-phone-unlocked-aluminum/4796300.p?id=bb4796300&skuId=4796300> (showing Nexus 6P phones available at Longview, Texas location as of 6/09/16 at 11:00 a.m.).

### **FACTUAL BACKGROUND**

12. NSN and its affiliates are multinational data networking and telecommunications equipment companies. NSN provides a mobile broadband and services portfolio for designing and building communications networks, operating and maintaining them, and enhancing subscribers' experiences.

13. NSN's parent company was formed in 2006 as Nokia Siemens Networks, a joint venture between Siemens Communications and Nokia's Network Business Group.

14. Nokia Siemens Networks quickly became a global telecommunications powerhouse, rapidly establishing and expanding cellular networks across the world. In 2008, Nokia Siemens Networks launched its LTE solution for radio and core networks, which included a line of base stations called the Flexi Base Stations. LTE-capable networks began running on the Flexi Base Stations in late 2008, which allowed GSM/EDGE, WCDMA/HSPA/HSPA+ and LTE standards to run concurrently in a single unit.

15. By 2010, Nokia Siemens Networks had become the world leader in LTE infrastructure. That year, Nokia Siemens Networks increased its significant footprint in the United States by acquiring the wireless-network division of Motorola.

16. In 2013, Nokia acquired Siemens' entire stake in Nokia Siemens Networks. Following the acquisition, the company was rebranded "Nokia Networks" in 2014.<sup>1</sup>

17. NSN and its affiliates, among other things, works on developing, providing, and maintaining LTE networks that support major U.S. mobile carriers, such as T-Mobile.

### **TECHNOLOGICAL BACKGROUND**

18. NSN's Patents-In-Suit, described in more detail below, are a reflection of the breadth of NSN's extensive dedication and investment in the technology and development of standardized communication protocols.

19. The development of standardized communication protocols has allowed the cellular industry to move from first generation cellular phones, which were only capable of making voice calls, to fourth generation ("4G") cellular phones that are capable of receiving and transmitting data at very high rates.

20. Long Term Evolution ("LTE") is the 4G technology that was developed by the Third Generation Partnership Project ("3GPP") to meet the ever-growing data demands of cellular users. LTE development began in 2004, and the first versions of the LTE standards were finalized in December 2008. A follow-on to LTE, called LTE-Advanced ("LTE-A"), has also been developed.

21. One of the major changes in LTE was to depart from the Code Division Multiple Access ("CDMA") schemes that dominated third generation ("3G") technologies. To achieve the increase in data rates, LTE opted to use Orthogonal Frequency Division Multiple Access ("OFDMA") to allocate resources for downlink transmissions, and Single Carrier Frequency

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<sup>1</sup> For a brief period of time following the transaction, the company was known publicly as "Nokia Solutions and Networks." This remains the legal name of the various Nokia Networks corporate entities.

Division Multiple Access (“SC-FDMA”) to allocate resources for uplink transmissions. By using these access schemes, LTE provides significant flexibility for the network infrastructure to optimize resource allocations to accommodate network conditions.

22. NSN was a major contributor to the development of LTE, and the inventions described in NSN’s Patents-In-Suit were conceived as solutions to problems that arose during that development. Each of the NSN Patents-In-Suit is essential to the LTE standards and has been declared essential to those standards.

### **THE STANDARDIZATION PROCESS**

23. Many companies presently manufacture wireless cellular devices. In order to enable devices manufactured by different entities to interoperate, standards-setting organizations (“SSOs”) have formed to promulgate industry standards—communication protocols that can be adopted by different manufacturers to enable interoperability between their devices.

24. The LTE standard, as well as other mobile radio standards, was developed under the patronage of ETSI. ETSI is a non-profit institution that was founded in 1988 through an initiative of the European Commission by several companies active in mobile communications with the objective to develop a common mobile radio standard for Europe. On information and belief, ETSI currently has approximately 750 members from 64 countries. NSN and Huawei are both members.

25. In order to assist with the usage of patented technology in standardized communication protocols, ETSI adopted an Intellectual Property Rights Policy (the “ETSI IPR Policy”) in 1994 to assist in balancing the interests of patent holders and of manufacturers of standard-compliant products.

26. The ETSI IPR Policy contains rules concerning the disclosure and licensing of patents that are considered essential to practice its standards. Section 6.1 of the ETSI IPR Policy provides that:

When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory terms and conditions under such IPR . . . .

27. As stated above, NSN's Patents-In-Suit are each essential to the LTE standard and were declared essential to the LTE standard pursuant to the ETSI IPR Policy.

28. NSN has complied with all of its FRAND obligations arising from NSN's participation in the SSOs.

29. NSN and Huawei have engaged in licensing discussions regarding their respective patents declared as essential to cellular communication standards, and NSN has made numerous offers to license its declared essential patents to Huawei on terms that are fair, reasonable, and non-discriminatory. To date, Huawei has been unwilling to accept all such offers.

30. NSN has even offered to enter into arbitration to resolve its dispute with Huawei regarding their respective declared essential patents. Such an arbitration would have determined the appropriate royalty rate applicable to each parties' respective declared, essential patent portfolio, and avoided Huawei's suit against T-Mobile as it pertains to NSN's equipment, as well as the need for NSN to assert claims against Huawei. This offer remains pending, but to date Huawei has been unwilling to agree to arbitration, and continues to use NSN's declared, essential patents without paying compensation to NSN.

### **OVERVIEW OF NSN'S PATENTS-IN-SUIT**

31. On August 26, 2014, the '718 patent was duly and legally issued for an invention titled, "Randomization of Block Spreading Signals." A true and correct copy of the '718 patent is attached hereto as Exhibit A.

32. In cellular communications it is important to attenuate co-channel interference between user equipments ("UE") so that each UE can properly transmit and receive data to and from the network. During the development of LTE-A one of the challenges facing ETSI was that there were not enough block spreading codes available to provide sufficient differentiation of UEs in the block code domain between cells. For example, even if each UE within a cell were assigned a unique block spreading code, transmissions from one UE operating at an edge of a first cell might regularly interfere with transmissions from another UE using the same block spreading code in an adjacent cell. The '718 patent mitigates co-channel interference by randomizing block-spread transmissions from UEs in adjacent cells, thereby solving the problem of not having enough block spreading codes to uniquely assign to all UEs across all adjacent cells.

33. On October 8, 2013, the '636 patent was duly and legally issued for an invention titled, "Channel Selection for Carrier Aggregation." A true and correct copy of the '636 patent is attached hereto as Exhibit B.

34. The '636 patent provides for improvements to channel selection in LTE-A. In LTE-A, a user equipment transmits acknowledgements and negative acknowledgements to network nodes, *i.e.*, eNB, on the Physical Uplink Control Channel. Among other things, the '636 patent provides a single mapping table design for channel selection for these transmissions for up

to four bits. The '636 patent also provides improvements to channel selection when carrier aggregation is used.

35. Nokia Solutions and Networks Oy owns the entire right, title, and interest to the Patents-In-Suit. NSN US is the exclusive licensee of the Patents-In-Suit.

36. NSN's Patents-In-Suit are essential to the LTE standards. Accordingly, each of NSN's Patents-In-Suit has been declared essential to the LTE standards and NSN has undertaken, in accordance with the applicable rules of the ETSI, to grant licenses under each of NSN's Patents-In-Suit on fair, reasonable, and nondiscriminatory ("FRAND") terms and conditions.

37. The '718 patent was declared essential on July 3, 2013, when the '718 patent's publication, US 2012/0039281, was declared essential.

38. The '636 patent was declared essential on November 29, 2013, when the '636 patent's publication, US 2012/0039407, was declared essential.

### **COMMON ALLEGATIONS**

39. On information and belief, without license or permission from NSN, Huawei has infringed, literally and/or under the doctrine of equivalents, and continues to infringe, one or more claims of each of NSN's Patents-In-Suit by engaging in acts constituting infringement under 35 U.S.C. § 271, including but not necessarily limited to one or more of making, using, selling and offering to sell, in the United States, and importing into the United States, LTE compliant devices, such as mobile phones and tablets, including, but not limited to Huawei's Nexus 6p, Honor 5x, P8 lite, GX8, Ascend Mate 2, SnapTo, and Mediapad T1 8.0 Pro (hereinafter, the "Accused Products").



40. On information and belief, Huawei induces infringement by others of one or more claims of NSN's Patents-In-Suit. For example, Huawei takes active steps to promote and encourage the use of the Accused Products in a manner that connects to (and operates on) the LTE networks and complies with the LTE standards. On information and belief, Huawei is aware of NSN's Patents-In-Suit, at least as of the date NSN provided claim charts to Huawei detailing the infringement of NSN's Patents-In-Suit and/or at least as of the filing of this lawsuit, and knows or should have known that the inducing acts described herein constitute infringement of NSN's Patents-In-Suit.

41. Huawei takes specific steps to actively induce others—such as, for example customers and operators—to use the Accused Products. For example, and without limitation, on information and belief, Huawei actively induces direct infringement of one or more claims of NSN's Patents-In-Suit, by others, by promoting, instructing, offering, and encouraging others to use the Accused Products in a manner that connects to and operates on the LTE networks. Furthermore, Huawei also actively promotes the use of the LTE functionality, including for example and without limitation, by way of authorized resellers, customer service and sales representatives, and/or its internet sales websites. Such active promotion includes advertising that the Accused Products are LTE capable and can achieve the speeds associated with LTE networks. And, on information and belief, Huawei knows or should know that such sales and promotions actively induce others to directly infringe one or more claims of NSN's Patents-In-Suit, including for example, by prompting them to use the Accused Products in an infringing manner.

42. As another example, Huawei provides and/or authorizes the providing of instruction manuals, product manuals, and other materials (*e.g.*, with the sale of a product and/or

offered on its website) for customers and other users of the Accused Products, and for example, on information and belief, shows how to make use of the Accused Products on an LTE network. Additionally, on information and belief, Huawei knows or should know that such materials and instructions actively induce others to directly infringe one or more claims of NSN's Patents-In-Suit, including by instructing them to use the Accused Products.

43. Further, Huawei and/or its authorized retailers operate stores throughout the United States, including stores in this District, such as the Best Buy stores in Longview and Tyler, Texas, that upon information and belief, sell, promote, and instruct the use of the Accused Products, by for example, selling and/or offering for sale the Accused Products configured to connect and operate on an LTE network.

44. Additionally, Huawei makes, uses, sells, offers for sale, and/or imports into the United States LTE compliant products that contribute to the infringement of one or more claims of NSN's Patents-In-Suit when used by customers and other users for their benefit. For example, Huawei—or those on its behalf—sells Accused Products specifically to make use of the devices' LTE network capabilities. The Accused Products are offered for sale and sold to customers in the United States by Huawei (or an authorized reseller), including through its website and various storefronts, and when used as instructed by Huawei, practice the LTE standards and therefore infringe NSN's Patents-In-Suit which are essential to LTE.

45. The Accused Products are specifically configured to—by Huawei or under its authorization—for example, use the devices' capabilities to practice the LTE standards and to operate on LTE networks. On information and belief, once configured, the Accused Products and/or components within the Accused Products are at least material and do not have any substantial uses other than to practice the LTE standards and to operate on LTE networks. On

information and belief, Huawei knows the Accused Products and/or components included therein, are especially made or especially adapted for infringement of NSN's Patents-In-Suit, and not staple articles or commodities of commerce suitable for substantial noninfringing use.

**COUNT ONE**

**(Infringement of U.S. Patent No. 8,817,718)**

46. NSN incorporates by reference the allegations set forth in the preceding paragraphs of these counterclaims as though fully set forth herein.

47. NSN incorporates by reference the infringement contentions related to the '718 patent that will be prepared and served pursuant to Local Patent Rules 3-1 and 3-2.

48. In violation of 35 U.S.C. § 271, Huawei has infringed, induced others to infringe, and/or contributed to the infringement of one or more claims of the '718 patent, including but not limited to claim 10, literally and/or under the doctrine of equivalents, by among other things, making, using, offering for sale, selling, and/or importing into the United States unlicensed products in a manner that infringes one or more claims of the '718 patent. Such unlicensed products by way of example and without limitation, include the Accused Products and/or any other Huawei products that are compliant with the LTE standards. In addition, on information and belief, users of the Accused Products infringe the '718 patent by using the Accused Products on LTE networks.

49. Huawei has knowledge of the '718 patent and has known of the '718 patent and its infringement thereof since at least April 21, 2016, when NSN provided Huawei with a claim chart detailing Huawei's infringement.

50. On information and belief, Huawei takes active steps to induce infringement of one or more of the claims of the '718 patent by others, including its retailers, distributors, and

end users, and Huawei takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. Such active steps include, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, print advertisements, etc.), promoting, and instructing others to use and/or how to use the Accused Products on LTE networks. Additionally, by example and without limitation, Huawei actively induces infringement by instructing, promoting, encouraging, and/or providing promotional materials detailing how to use the Accused Products on LTE networks. Additionally, specific examples of steps taken in furtherance of its active inducement by others are set forth above which are incorporated by reference.

51. On information and belief, Huawei knows or should know that such activities induce others to directly infringe one or more claims of the '718 patent, including for example, by prompting them to use the Accused Products on LTE networks. As such, Huawei has knowingly induced and continued to induce direct infringement of the '718 patent by its retailers, distributors, and end users.

52. On information and belief, Huawei contributes to the infringement of the '718 patent by others, including its customers, network users, and authorized resellers. Acts by Huawei that contribute to the infringement of others include, but are not limited to, the sale, offer for sale, and/or import by Huawei of the Accused Products. The Accused Products and/or the components configured to communicate in accordance with the LTE standard are not suitable for substantial noninfringing use. On information and belief, Huawei knows such Accused Products to be especially adapted to infringe by, including but not limited to, using the Accused Products on the LTE network and that such mobile devices are not suitable for substantial noninfringing

use. Additionally, specific examples of steps taken in furtherance of its contributory infringement are set forth above which are incorporated by reference.

53. By way of at least this Complaint and the claim charts sent to Huawei on April 21, 2016, Huawei knows of the '718 patent and performs acts that it knows, or should know, induce, and/or contribute to the direct infringement of the '718 patent by third parties.

54. Huawei undertook and continues its infringing actions despite an objectively high likelihood that such activities infringed the '718 patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least the date that NSN provided Huawei with claim charts and at least since the date of the filing of this action, Huawei has been aware of an objectively high likelihood that its actions constituted and continue to constitute infringement of the '718 patent, and that the '718 patent is valid. On information and belief, Huawei could not reasonably, subjectively believe that its actions do not constitute infringement of the '718 patent, nor could it reasonably, subjectively believe that the patent is invalid. Despite that knowledge and subjective belief, and the objectively high likelihood that its actions constitute infringement, Huawei has continued its infringing activities. As such, Huawei willfully infringes the '718 patent.

55. Huawei's infringement of the '718 patent has caused and continues to cause damage to NSN and NSN is entitled to recover from Huawei FRAND compensation as a result of Huawei's wrongful acts through the date of trial in an amount subject to proof at trial, and such other relief as may be appropriate, including specifically, but not limited to, an appropriate prospective royalty for any infringement by Huawei after judgment is entered.

56. Huawei's infringement of the '718 patent is exceptional and entitles NSN to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT TWO**

**(Infringement of U.S. Patent No. 8,553,636)**

57. NSN incorporates by reference the allegations set forth in the preceding paragraphs of these counterclaims as though fully set forth herein.

58. NSN incorporates by reference the infringement contentions related to the '636 patent that will be prepared and served pursuant to Local Patent Rules 3-1 and 3-2.

59. In violation of 35 U.S.C. § 271, Huawei has infringed, induced others to infringe, and/or contributed to the infringement of one or more claims of the '636 patent, including but not limited to claim 8, literally and/or under the doctrine of equivalents, by among other things, making, using, offering for sale, selling, and/or importing into the United States unlicensed products in a manner that infringes one or more claims of the '636 patent. Such unlicensed products by way of example and without limitation, include the Accused Products and/or any other Huawei products that are compliant with the LTE standards. In addition, on information and belief, users of the Accused Products infringe the '636 patent by using the Accused Products on LTE networks.

60. Huawei has knowledge of the '636 patent and has known of the '636 patent and its infringement thereof since at least April 21, 2016, when NSN provided Huawei with a claim chart detailing Huawei's infringement.

61. On information and belief, Huawei takes active steps to induce infringement of one or more of the claims of the '636 patent by others, including its retailers, distributors, and end users, and Huawei takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. Such active steps include, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, print

advertisements, etc.), promoting, and instructing others to use and/or how to use the Accused Products on LTE networks. Additionally, by example and without limitation, Huawei actively induces infringement by instructing, promoting, encouraging, and/or providing promotional materials detailing how to use the Accused Products on LTE networks. Additionally, specific examples of steps taken in furtherance of its active inducement by others are set forth above which are incorporated by reference.

62. On information and belief, Huawei knows or should know that such activities induce others to directly infringe one or more claims of the '636 patent, including for example, by prompting them to use the Accused Products on LTE networks. As such, Huawei has knowingly induced and continued to induce direct infringement of the '636 patent by its retailers, distributors, and end users.

63. On information and belief, Huawei contributes to the infringement of the '636 patent by others, including its customers, network users, and authorized resellers. Acts by Huawei that contribute to the infringement of others include, but are not limited to, the sale, offer for sale, and/or import by Huawei of the Accused Products. The Accused Products and/or the components configured to communicate in accordance with the LTE standard are not suitable for substantial noninfringing use. On information and belief, Huawei knows such Accused Products to be especially adapted to infringe by, including but not limited to, using the Accused Products on the LTE network and that such mobile devices are not suitable for substantial noninfringing use. Additionally, specific examples of steps taken in furtherance of its contributory infringement are set forth above which are incorporated by reference.

64. By way of at least this Complaint and the claim charts sent to Huawei on April 21, 2016, Huawei knows of the '636 patent and performs acts that it knows, or should know, induce, and/or contribute to the direct infringement of the '636 patent by third parties.

65. Huawei undertook and continues its infringing actions despite an objectively high likelihood that such activities infringed the '636 patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least the date that NSN provided Huawei with claim charts and at least since the date of the filing of this action, Huawei has been aware of an objectively high likelihood that its actions constituted and continue to constitute infringement of the '636 patent, and that the '636 patent is valid. On information and belief, Huawei could not reasonably, subjectively believe that its actions do not constitute infringement of the '636 patent, nor could it reasonably, subjectively believe that the patent is invalid. Despite that knowledge and subjective belief, and the objectively high likelihood that its actions constitute infringement, Huawei has continued its infringing activities. As such, Huawei willfully infringes the '636 patent.

66. Huawei's infringement of the '636 patent has caused and continues to cause damage to NSN and NSN is entitled to recover from Huawei FRAND compensation as a result of Huawei's wrongful acts through the date of trial in an amount subject to proof at trial, and such other relief as may be appropriate, including specifically, but not limited to, an appropriate prospective royalty for any infringement by Huawei after judgment is entered.

67. Huawei's infringement of the '636 patent is exceptional and entitles NSN to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**DEMAND FOR A JURY TRIAL**

68. NSN hereby demands trial by jury on all claims and issues so triable.



**PRAYER FOR RELIEF**

69. NSN respectfully requests that this Court enter judgment against Huawei as follows:

- A. That each of NSN's Patents-In-Suit has been and continues to be infringed by Huawei;
- B. That each of NSN's Patents-In-Suit is enforceable, eligible for patent protection, and not invalid;
- C. That Huawei's infringement of NSN's Patents-In-Suit has been willful;
- D. That NSN has complied with its legal obligation with respect to negotiating FRAND terms and conditions of licenses under the applicable IPR Policy;
- E. That Huawei has failed to comply with its legal obligation with respect to negotiating FRAND terms and conditions of licenses under the applicable IPR Policy;
- F. An award constituting an appropriate FRAND royalty for past infringement;
- G. An award of a mandatory, ongoing, prospective royalty on each future product sold by Huawei that is found to infringe one or more of NSN's Patents-In-Suit, and on all future products that are not colorably different from products found to infringe by virtue of their compliance with the LTE standard;
- H. In the alternative, if no prospective royalty is granted, a permanent injunction preventing further infringement, contributory infringement, and inducement of infringement of NSN's Patents-In-Suit until and unless Huawei pays to NSN compensation for past infringement, and irrevocably commits to payment of FRAND compensation in the future;

- I. An award of pre-judgment interest and costs;
- J. An award of all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages found;
- K. A finding that this is an exceptional case and award to NSN of its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285;
- L. A judgment dismissing Huawei's Complaint with prejudice;
- M. A judgment that Huawei take nothing by its Complaint in this action;
- N. A judgment that NSN equipment supplied to T-Mobile does not infringe, alone or in combination, either directly or indirectly, any valid and enforceable claim of Huawei's Asserted Patents, nor is such equipment used in any infringement of any valid and enforceable claim; and
- O. Such other and further relief as this Court may deem just and proper.

Dated: June 21, 2016

Respectfully submitted,

By: Deron R. Dacus

Deron R. Dacus

State Bar No: 00790553

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**CERTIFICATE OF SERVICE**

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who are deemed to have consented to electronic service. Local Rule CV-5(a)(3)(A). Pursuant to Federal Rule of Civil Procedure 5(d) and Local Rule CV-5(e), all other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of the foregoing by U.S. First Class Mail on this 25th day of May, 2016.

/s/ Deron R. Dacus

Deron R. Dacus